

ABSTRACT

The present invention relates to a process for producing high-quality crystals of protein or organic substances easily and efficiently. A solution of protein or an organic substance is prepared and then is cooled slowly to be supersaturated to a low degree. This supersaturated solution is irradiated with a femtosecond laser 10. A local explosion phenomenon occurs at the focal point of the laser and thereby a crystalline nucleus is generated. A high-quality crystal is obtained when a crystal is grown on the crystalline nucleus over a long period of time. The femtosecond laser to be used herein can be a titanium:sapphire laser having a wavelength of 800 nm, a duration of 120 fs, a frequency of 1 kHz, and an output of 400 mW.